

OIB - DC-8 11/13/14 Science Report

Aircraft:

[DC-8](#) ([See full schedule](#))

Date:

Thursday, November 13, 2014

Mission:

OIB

Mission Location:

Antarctica

Mission Summary:

F17 Bellingshausen Sea I

Accomplishments

- Low-altitude survey (1,500 ft AGL) over the Bellingshausen and Amundsen Seas.
- ATM, albedo, KT-19, snow, Ku-band, MCoRDS, gravimeter, and DMS were operated on the survey lines.
- Collected additional high altitude data on transits to and from the survey area.
- Ramp pass at Punta Arenas airport after takeoff at 1,500 ft AGL.
- Collected MCoRDS ice thickness data over Burke Island.
- Satellite tracks: none.
- Repeat Mission: 2009, 2010, 2011, 2012.

Instrument	Operated	Data Volume	Instrument Issues/Comments
ATM	yes	56 GB	None.
CAMBOT	yes	76 GB	None.
DMS	yes	120 GB	None.
Snow Radar	yes	532 GB	None.
Ku-band Radar	yes	532 GB	None.
MCoRDS	yes	0.1 TB	None.
KT-19	yes	10 MB	None.
Albedo	yes	4.8 GB	None.
Albedo camera	yes	620 MB	None.
Gravimeter	yes	2.1 GB	None.

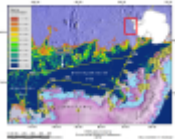
Mission Report (Michael Studinger, Mission Scientist)

Today's flight represents a continuation of the IceBridge time series, repeating much of the 21 October 2009 and 30 October 2010 Sea Ice 01 flights and the 23 October 2011 and 13 October 2012 Bellingshausen 1 flights.

LiDAR data collection started 11/13/2014 14:27 UTC and ended at 21:14 UTC. In total we collected 6.8 hours of LiDAR data. We were able to stay below clouds for most of the day. At 20:30 Z, about two-thirds between waypoints 110n and 111n we climbed up to FL400 to preserve fuel for the return to Punta Arenas. The last 30 minutes on this line were clouded out for DMS and ATM, who otherwise had a very good day.

Images:

Figure 1: Today's trajectory in yellow. November 12, 2014 AMSR-2 sea ice



[Read more](#)

Submitted by:

Michael Studinger on 11/13/14

Related Flight Report:

DC-8 11/13/14

Flight Number:

150124

Payload Configuration:

Operation IceBridge 2014

Nav Data Collected:

Yes

Total Flight Time:

11.4 hours

Submitted by:

Frank Cutler on 11/14/14

Flight Segments:

From:	SCCI	To:	SCCI
Start:	11/13/14 11:58 Z	Finish:	11/13/14 23:24 Z
Flight Time:	11.4 hours		
Log Number:	158003	PI:	Michael Studinger
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	Purpose of Flight: OIB 2014 Science Flight ? Bellingshausen 1 Sea Ice at 1,500 ft AGL Aircraft Status: Airworthy Sensor Status: All instruments operated Significant Issues: None Accomplishments: Takeoff at 317 11 58 52 Land 317 23 24 42 After takeoff accomplish a calibration ramp pass at 1206Z and 1500?agl. Climb to transit altitude of FL330. Descend to start sea ice track at 1443Z at 900? agl on south bound track. The following tracks were flown at 900? to 1500? to avoid clouds: Start west bound track at 1527Z Start southwest bound track at 1704Z Start south bound track at 1726Z Overfly Burke Island at ~ 1742Z and 2600? msl (island altitude appeared to peak at 1300? agl) Start west bound track at 1755Z Start north bound track at 1817Z Start east bound track at 1912Z Start climb at 2031Z while still on east bound track; climb to FL400. Complete ground tracks and turn north to PUQ at 2113Z. Planned events: Continue science flights out of Punta Arenas, Chile		

Flight Hour Summary:

					158003
Flight Hours Approved in SOFRS					300
Total Used					292.1
Total Remaining					7.9
158003 Flight Reports					
Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
10/06/14	150101	Science	1.2	1.2	298.8
10/07/14 - 10/08/14	150102	Science	5.2	6.4	293.6
10/08/14	150103	Science	3.7	10.1	289.9
10/13/14	150104	Transit	10.4	20.5	279.5

10/13/14	150105	Transit	3.2	23.7	276.3
10/16/14	150106	Science	11	34.7	265.3
10/18/14 - 10/19/14	150107	Science	11.9	46.6	253.4
10/20/14	150108	Science	11.7	58.3	241.7
10/23/14	150109	Science	11.8	70.1	229.9
10/25/14	150110	Science	11.4	81.5	218.5
10/26/14 - 10/27/14	150111	Science	11.9	93.4	206.6
10/28/14	150112	Science	11.5	104.9	195.1
10/29/14	150113	Science	10.9	115.8	184.2
10/31/14	150114	Maintenance	2.8	118.6	181.4
11/01/14	150115	Maintenance	3	121.6	178.4
11/02/14	150116	Science	10.9	132.5	167.5
11/03/14	150117	Science	11.1	143.6	156.4
11/05/14	150118	Science	11.4	155	145
11/06/14	150119	Science	11.1	166.1	133.9
11/07/14	150120	Science	10.9	177	123
11/08/14	150121	Science	11.4	188.4	111.6
11/10/14	150122	Science	11.2	199.6	100.4
11/11/14	150123	Science	11.2	210.8	89.2
11/13/14	150124	Science	11.4	222.2	77.8
11/14/14	150125	Science	11.5	233.7	66.3
11/15/14	150126	Science	11.2	244.9	55.1
11/16/14	150127	Science	11.1	256	44
11/21/14	150128	Science	11.2	267.2	32.8
11/22/14	150129	Science	10.8	278	22
11/24/14	150130	Transit	2.9	280.9	19.1
11/25/14 - 11/26/14	150131	Transit	11.2	292.1	7.9

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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NASA Official: Bruce A.

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